

**CLAIMS**

1. A fire-resistant composite yarn comprising:
  - 5 - flame-retarded fibers in a quantity greater than 40% with respect to the total weight of the yarn, the said fibers being formed on the basis of a crystalline or semi-crystalline polymeric material;
  - hydrophilic fibers in a quantity of between 10% and 45%  
10 with respect to the weight of flame-retarded fibers, the said hydrophilic fibers being formed by a non-fusible material;
  - thermostable fibers in a quantity of between 4% and 50% with respect to the total weight of the yarn, the said  
15 thermostable fibers being formed by a non-flammable material.
2. A yarn according to Claim 1, characterised in that the  
20 polymeric material forming the basis of the flame-retardant fibers is chosen from the group comprising polyesters, polypropylenes and polyvinyl alcohols.
3. A yarn according to Claim 2, characterised in that the  
25 flame-retarded fibers also comprise a flame-retarded polymeric material.
4. A yarn according to Claim 2, characterised in that the

flame-retarded fibers are treated with a flame-retardant agent.

5. A yarn according to any one of Claims 1 to 4,  
5 characterised in that the hydrophilic fibers are produced from a natural or artificial cellulosic material such as cotton, viscose, or rayon or based on wool.

6. A yarn according to any one of Claims 1 to 5,  
10 characterised in that the hydrophilic fibers are treated so as to be at least partially flame retarded.

7. A yarn according to any one of Claims 1 to 6,  
15 characterised in that the thermostable fibers are produced from a polymeric material chosen from the group comprising para-aramids, meta-aramids, polybenzimidazole-imides, polybenzoxazoles, polyacrylates, polyphenols, polyamide-imides and poly-p-phenylenediamine-terephthalamides (PPTA or M5).

20

8. A yarn according to any one of Claims 1 to 7,  
characterised in that the fibers forming the yarn are mixed intimately.

25 9. A yarn according to Claim 8, characterised in that it comprises between 4% and 20% by weight thermostable fibers.

10. A yarn according to any one of Claims 1 to 7, characterised in that it comprises a core yarn formed with the thermostable fibers and, associated around the said core yarn, a coating formed from an intimate mixture of the flame-retarded fibers and hyrdophilic fibers.

11. A yarn according to Claim 10, characterised in that it comprises between 20% and 50% by weight thermostable fibers.

12. A textile intended for producing protective clothing, characterised in that it comprises at least one woven or knitted textile layer formed with yarns according to any one of Claims 1 to 11.

13. A textile according to Claim 12, characterised in that the textile layer is dyed or printed.

14. A textile according to Claim 12 or 13, characterised in that it comprises, associated with the textile layer, a non-flammable impermeable/breathable layer.